

WHAT IS CLAIMED IS:

1. A circuit device manufacturing method comprising:
forming separation groove in a conductive foil from a
top surface to form conductive pattern that are integrally
5 connected at the bottom portion of the conductive foil;
mounting circuit element onto desired location of the
conductive pattern; and
sealing with a resin layer so as to cover the circuit
element and fill the separation groove;
10 wherein plasma is irradiated onto the top surface of the
conductive foil.
2. A circuit device manufacturing method comprising:
forming separation groove in a conductive foil from a
top surface to form conductive pattern that are integrally
15 connected at the bottom portion of the conductive foil;
mounting circuit element onto desired location of the
conductive pattern;
irradiating plasma onto the top surface of the conductive
foil, including the circuit element; and
20 sealing with a resin layer so as to cover the circuit
element and fill the separation groove.
3. The method of Claim 1, wherein irradiation of the plasma
is carried out prior to the step of mounting the circuit element.

4. The method of Claim 1, wherein irradiation of the plasma is carried out subsequent the step of mounting the circuit element.

5 5. The method of Claim 1 or 2, wherein contaminants attached to the surfaces of the separation groove are removed by the plasma.

6. The method of Claim 5, wherein the contaminants comprise organic or inorganic matter.

10 7. The method of Claim 1 or 2, wherein the surface of the separation groove is roughened by the plasma irradiation.

8. The method of Claim 1 or 2, wherein the surface of the separation groove is oxidized by the plasma irradiation.

9. The method of Claim 1 or 2, wherein the plasma irradiation is carried out using oxygen gas.

15 10. The method of Claim 1 or 2, wherein the plasma irradiation is carried out using an inert gas, such as argon, neon, or helium.

11. The method of Claim 1 or 2, wherein the conductive foil is formed of a metal having copper as the principal material.

20 12. The method of Claim 1 or 2, wherein the circuit element is semiconductor element that is electrically connected via metal wires.

13. The method of Claim 1 or 2, wherein the rear surface

of the conductive foil is eliminated until the resin layer exposes at the rear surface of the conductive foil to electrically separate the respective conductive pattern.